SNOWMOBILE ACCIDENT ANALYSIS
PROVINCE OF MANITOBA
WINTER OF 1983-84

This report includes all snowmobile accidents reported in Manitoba during the winter of 1983-84. Reportable accidents are those involving fatalities, personal injuries, or property damage in excess of $100.00. The primary function of this information is to help, Instructors in the Manitoba Snowmobile Safety Training Program, identify the major causes of snowmobile accidents and to enable them to lend special emphasis to the appropriate countermeasures.

	1981-82	1982-83	1983-84	Percent Change from 1982-83
Number of Accidents	59	79	73	- 7.5%
Number of Snowmobiles	68	93	85	- 8.6%
Number of machines registered in Province* (As of end of July for year indicated)	35,853	21,767	29,196	+ 34.1%
Fatal Accidents	2	6	2	- 66.6%
Number of Fatalities	2	7	2	- 71.4%
Injurious Accidents	43	59	55	- 6.8%
Number of Personal Injuries (Not including fatalities)	45	79	63	- 20.3%
Number of Accidents (Injuries not stated)	14	14	16	+ 14.3%
Property Damage	$33,571	$50,327	$62,937	+ 25.1%

*Snowmobiles in Manitoba are registered for three year registration periods. The figures listed represent the aggregate for the portion of the three year registration to the year indicated. 1983-84 was year two of the 1982-85 registration period.

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A. ACCIDENTS BY MONTH

	1981-82	% OF TOTAL ACCIDENTS	1982-83	% OF TOTAL ACCIDENTS	1983-84	% OF TOTAL ACCIDENTS	PERCENT CHANGE FROM 1982-83
September	0	--	0	--	1	1.4%	+ 100.0%
October	0	--	1	1.3%	0	--	- 100.0%
November	2	3.4%	4	5.1%	5	6.8%	+ 25.0%
December	12	20.3%	11	13.9%	19	26.0%	+ 72.7%
January	15	25.4%	18	22.8%	21	28.8%	+ 16.7%
February	11	18.6%	29	36.7%	24	32.9%	- 17.2%
March	17	28.8%	10	12.7%	2	2.7%	- 80.0%
April	2	3.4%	5	6.3%	1	1.4%	- 80.0%
May	0	--	1	1.3%	0	--	- 100.0%

B. ACCIDENT LOCATIONS

	1981-82	% OF TOTAL ACCIDENTS	1982-83	% OF TOTAL ACCIDENTS	1983-84	% OF TOTAL ACCIDENTS	PERCENT CHANGE FROM 1982-83
Public Roadway	18	30.5%	31	39.2%	22	30.1%	- 29.0%
Rivers, Lakes and Creeks	13	22.0%	19	24.1%	18	24.6%	- 5.3%
Ditches and Right-of-Ways	5	8.5%	9	11.4%	12	16.4%	+ 33.3%
Fields, Farm Yards, Private Property	6	10.2%	5	6.3%	9	12.3%	+ 80.0%
Marked and Groomed Trails	2	3.4%	5	6.3%	5	6.8%	--
Bush Trails and Winter Roads	2	3.4%	3	3.8%	0	--	- 300.0%
Lakeshore, Riverbanks, Floodway	2	3.4%	3	3.8%	1	1.4%	- 66.7%
School Grounds, Sport Fields	2	3.4%	2	2.5%	1	1.4%	- 100.0%
Parking Lots	3	5.1%	1	1.3%	4	5.4%	+ 300.0%
Driveways	1	1.7%	1	1.3%	0	--	- 100.0%
Backlane, Alleys	1	1.7%	0	--	1	1.4%	+ 100.0%
*Unknown	4	6.8%	0	--	0	--	--

*Accident reports contained insufficient information to determine location.

C. ACCIDENT TYPES

	1981-82	% OF TOTAL ACCIDENTS	1982-83	% OF TOTAL ACCIDENTS	1983-84	% OF TOTAL ACCIDENTS	PERCENT CHANGE FROM 1982-83
Snowmobile/Fixed Object Collision .	18	30.5%	26	32.9%	25	34.2%	- 3.8%
Snowmobile/Motor Vehicle Collision.	15	25.4%	17	21.5%	17	23.3%	--
Single Snowmobile Accident	16	27.1%	17	21.5%	14	19.1%	- 17.6%
Snowmobile/Snowmobile Collision. .	7	11.9%	12	15.2%	12	16.4%	--
Snowmobile/Person Collision. . . .	1	1.7%	6	7.6%	4	5.5%	- 33.3%
Cutter Upset	0	--	1	1.3%	1	1.4%	--
Cutter/Fixed Object	1	1.7%	0	--	0	--	--
Cutter/Person Collision.	1	1.7%	0	--	0	--	--
Snowmobile/Train Collision	0	--	0	--	0	--	--
Unknown	0	--	0	--	0	--	--

D. LIGHT CON

	1981-82	% OF TOTAL ACCIDENTS	1982-83	% OF TOTAL ACCIDENTS	1983-84	% OF TOTAL ACCIDENTS	PERCENT CHANGE FROM 1982-83
Daylight	37	62.7%	33	41.8%	22	30.1%	- 33.3%
Darkness	20	33.9%	41	51.9%	42	57.5%	+ 2.4%
Dusk	2	3.4%	3	3.8%	9	12.3%	+ 200.0%
Unknown	0	--	2	2.5%	0	--	- 200.0%

E. AGE/SEX OF OPERATOR

	1981-82	% OF TOTAL OPERATORS	1982-83	% OF TOTAL OPERATORS	1983-84	% OF TOTAL OPERATORS	PERCENT CHANGE FROM 1982-83
Under 16 years of age	6	9.2%	8	8.7%	12	11M/1F 14.6%	+ 50.0%
16 - 20	20	30.8%	20	21.7%	16	15M/1F 19.5%	- 20.0%
21 - 25	10	15.4%	15	16.3%	22	20M/2F 26.8%	+ 46.6%
26 - 30	11	16.9%	22	23.9%	16	15M/1F 19.5%	- 27.3%
31 - 35	3	4.6%	10	10.9%	5	5M/0F 6.1%	- 50.0%
Over 35	11	16.9%	17	18.5%	9	9M/0F 11.0%	- 47.1%
Unknown	4	6.2%	0	--	2	2M/0F 2.4%	+ 200.0%

*Three of 85 snowmobiles involved in accidents were considered driverless.

F. CONDITIONS OF OPERATORS

	1981-82	% OF TOTAL OPERATORS	1982-83	% OF TOTAL OPERATORS	1983-84	% OF TOTAL OPERATORS	PERCENT CHANGE FROM 1982-83
Normal	43	66.2%	56	60.9%	58	70.7%	+ 3.6%
Intoxicated.	5	7.7%	15	16.3%	10	12.2%	- 33.3%
Had Been Drinking.	10	15.4%	18	19.6%	14	17.1%	- 22.2%
Unknown	7	10.8%	3	3.3%	0	--	- 300.0%

*Three of 85 snowmobiles involved in accidents were considered driverless.

G. REGISTRATION

	1981-82	% OF TOTAL MACHINES	1982-83	% OF TOTAL MACHINES	1983-84	% OF TOTAL MACHINES	PERCENT CHANGE FROM 1982-83
Snowmobiles Registered	44	64.7%	53	57.0%	49	57.6%	- 7.5%
Snowmobiles Not Registered	16	23.5%	36	38.7%	7	8.3%	- 80.6%
Snowmobiles Not Required to be Registered	6	8.8%	4	4.3%	29	34.1%	+ 625.0%
Unknown	2	2.9%	0	--	0	--	--

H. FATALITIES AND PERSONAL INJURIES

	SLIGHT INJURY	SERIOUS INJURY (HOSPITALIZED)	FATALITY	TOTAL	% OF TOTAL INJURIES
Snowmobile Operators	22	24	2	48	73.8%
Snowmobile Passengers	6	6	0	12	18.5%
Cutter Passengers	0	1	0	1	1.5%
Other (Pedestrians)	2	2	0	4	6.2%

I. OWNERSHIP OF SNOWMOBILES

	1981-82	% OF TOTAL MACHINES	1982-83	% OF TOTAL MACHINES	1983-84	% OF TOTAL MACHINES
Operated by Owner	32	47.1%	50	53.8%	44	51.8%
Operated by Other Persons	30	44.1%	37	39.8%	38	44.7%
No Operator	3	4.4%	1	1.1%	3	3.5%
Unknown	3	4.4%	5	5.4%	0	--

J. POSSIBLE INFRACTIONS NOTED ON ACCIDENT REPORTS

(i) The Snowmobile Act (17)

7 - Operating a snowmobile in prohibited area.

3 - Failure to comply with rules before crossing roadway.

2 - Operating snowmobile across roadway illegally.

1 - Operating an unregistered snowmobile.

1 - Failure to report an accident.

1 - Operating snowmobile carelessly and without reasonable consideration.

1 - Failure to exchange accident information.

1 - Unlicensed person operating snowmobile across roadway.

(ii) Criminal Code of Canada (5)

3 - Operating a snowmobile while having blood/alcohol level exceeding 80 mg. of alcohol in 100 ml. of blood.

2 - Operating snowmobile in a criminally negligent manner.

(iii) Highway Traffic Act (1)

1 - Failure to exchange information and remain at site of accident.

K. VEHICLE DEFECTS

The following machine defects were noted on the accident reports as contributing either directly or indirectly to the accident.

2 - Throttle malfunctions.

2 - Inoperative headlights.

1 - Brake malfunction.

1 - Ski broke.

L. DESCRIPTION OF ACCIDENT TYPES

(1) Snowmobile/Fixed Object Collisions (25)

There were 25 accidents reporting collisions between snowmobiles and fixed objects resulting in one operator fatality, 10 serious injuries to 7 operators and 3 passengers, and 12 slight injuries to 10 operators and 2 passengers. Nineteen of the accidents occurred during darkness, 4 during daylight and 2 during dusk. It was reported that 8 operators had been drinking and that 3 operators were intoxicated at the time of their accidents.

6 - Accidents involved snowmobiles that were being operated on lakes. Separate cases involved:

- 2 - Snowmobiles that were towing inflated inner tubes colliding with a dock and tree;
- 1 - Snowmobile struck a snowbank when the operator lost control,
- 1 - Snowmobile struck a stick that was protruding from a snowbank,
- 1 - Snowmobile struck a dock. It was reported that the snowmobile had faulty brakes,
- 1 - Accident contained insufficient information to actually determine what had happened.

5 - Accidents occurred involving snowmobiles that were being operated in ditches;

- 1 - Snowmobile flipped when a ski broke as it struck the pavement of a roadway,
- 1 - Snowmobile struck a log that was partially covered in snow,
- 1 - Snowmobile collided with a bridge support.
- 1 - Snowmobile struck a snowbank when the operator lost control for an unknown reason.
- 1 - Snowmobile collided with a guywire that was extending from a hydro pole. This accident resulted in the operator being killed. The accident occurred during darkness and it was reported that the headlight on the snowmobile was inoperative.

4 - Accidents occurred involving snowmobiles that were being illegally operated on roadways.

- 2 - Accidents occurred when the operators lost control of their snowmobiles. In one case the snowmobile struck a snowbank and in the other case the snowmobile struck a tree,
- 1 - Snowmobile struck a culvert,
- 1 - Accident contained insufficient information to actually determine what happened.

(1) Snowmobile/Fixed Object Collisions (cont'd)

3 - Accidents occurred when snowmobiles were being operated in farm yards. In one case the snowmobile struck a woodpile while in the second case the snowmobile struck a barbed wire fence. In the third accident, a snowmobile struck a rock.

2 - Accidents invovled snowmobiles being operated on rivers. In one case it was reported that the operator had fallen asleep causing his snowmobile to strike a tree. In the other case, the snowmobile collided with a snowfence.

2 - Accidents occurred when snowmobiles collided with trees while being operated along a snowmobile trail.

1 - Accident occurred when a snowmobile struck a stump while being operated along a powerline.

1 - Accident occurred when a snowmobile struck a wooden post as the operator was exiting a park.

1 - Accident occurred when a snowmobile struck a fence. The snowmobile was being operated in a parking lot and the operator had been drinking prior to the accident. It was also reported that the throttle was stuck.

(2) Snowmobile/Motor Vehicle Collisions (17)

There were 17 collisions between snowmobiles and motor vehicles. Seven collisions occurred during the hours of darkness, 7 during daylight and 3 occurred during dusk. These collisions resulted in 1 operator fatality, 5 serious injuries to 4 operators, and 1 passenger, and 11 slight injuries to 8 operators and 3 passengers. Three operators were intoxicated while 3 more had been drinking at the time of their accidents.

6 - Accidents occurred when snowmobiles collided with parked motor vehicles. Three accidents involved snowmobiles that were being operated on roadways while the remaining 3 accidents took place in parking lots. It was reported that 3 of the operators had been drinking and 1 operator was intoxicated at the time of their accident.

5 - Accidents occurred when snowmobiles that were crossing roadways collided with passing motor vehicles. One accident resulted in the operator being killed. It was reported that the operator was intoxicated at the time of the accident.

2 - Accidents occurred when parked snowmobiles were struck by motor vehicles. One accident occurred in a parking lot, while the other accident occurred on private property.

2 - Accidents occurred when snowmobiles collided "head-on" with on-coming motor vehicles.

1 - Accident occurred when a snowmobile collided with the rear of a tractor while operating in a ditch. It was reported that the snowmobile operator was intoxicated at the time of the accident.

1 - Accident occurred when a snowmobile collided with a passing motor vehicle while attempting to exit a laneway.

(3) Single Snowmobile Accidents (14)

There were 14 single snowmobile accidents resulting in 9 serious injuries to 8 operators and 1 passenger and 2 slight injuries to 1 operator and 1 passenger. Nine accidents occurred during darkness, 3 during dusk and 2 during daylight hours. It was reported that 2 operators had been drinking and that 1 operator was intoxicated at the time of their accidents.

3 - Accidents occurred while snowmobiles were being operated in ditches;

1 - Snowmobile sank in deep snow causing the operator to lose control.

1 - Snowmobile struck a patch of ice causing the operator to lose control and the snowmobile to flip,

1 - Snowmobile flipped when it came into contact with a bare stretch of ground.

3 - Accidents occurred while snowmobiles were being operated on roadways;

2 - Snowmobiles were being driven excessively fast at the time of the accidents. It was reported that one operator was intoxicated.

1 - Accident contained insufficient information to actually determine what happened.

3 - Accidents occurred while snowmobiles were being operated on lakes;

1 - Accident occurred when a passenger fell off a snowmobile that was being ridden by four individuals,

1 - Snowmobile flipped when it's left ski broke,

1 - Accident occurred when a passenger fell from a snowmobile that was being driven too fast for the conditions.

2 - Accidents occurred while snowmobiles were being operated on snowmobile trails. In one accident the snowmobile hit a rut and overturned while in the second accident the snowmobile flipped when the operator attempted to climb a steep embankment.

1 - Accident contained insufficient information to actually determine what happened. It was reported, however, that the snowmobile was stolen.

1 - Accident occurred when the operator lost control of the snowmobile. No further details are available. It was reported that the operator had been drinking at the time of the accident.

1 - Accident occurred when a snowmobile was driven over a steep embankment.

(4) Snowmobile/Snowmobile Collisions (12)

There were 12 accidents involving snowmobiles in collision with other snowmobiles. These accidents resulted in 6 serious injuries to 5 operators and 1 passenger and 3 slight injuries to operators. Seven accidents occurred during daylight, 4 during darkness and 1 during dusk. It was reported that 1 operator had been drinking and that 1 operator was intoxicated at the time of their accident.

7 - Accidents occurred when snowmobiles drove into the rear of another snowmobile. In 2 accidents, both snowmobiles that were struck were parked along a snowmobile trail.

2 - Accidents occurred when snowmobiles were side-swiped by a second snowmobile. One accident involved a snowmobile passing another snowmobile along a trail. One of the operators in this particular case was reported as intoxicated at the time of the accident. In the second case, 2 snowmobiles collided during blizzard conditions while operating on the floodway.

1 - Accident occurred when a snowmobile, while being operated on a river, slid into another snowmobile.

1 - Accident occurred when a snowmobile that was being operated in a ditch, collided "head-on" with an on-coming snowmobile at the crest of a hill.

1 - Accident occurred when a snowmobile that was parked in a parking lot was struck by a second snowmobile.

(5) Snowmobile/Pedestrian Collisions (4)

There were 4 accidents involving snowmobiles in collision with pedestrians resulting in 2 serious and 2 slight injuries to pedestrians. Three accidents occurred during darkness while 1 accident occurred during daylight hours. It was reported that 2 snowmobile operators were intoxicated at the time of the accidents.

4 - Accidents occurred when pedestrians were struck by snowmobiles while walking down roadways.

(6) Cutter Accident (1)

There was 1 accident which involved a cutter. This accident occurred during daylight and resulted in a serious injury to a passenger.

1 - Accident occurred when a bolt on a snowmobile hitch broke causing the cutter to flip.

M. FATALITIES

In the 1983-84 snowmobile season, there were two fatal accidents resulting in two operator fatalities.

- On December 27, 1983, a 15-year old Lac du Bonnet boy was killed when the snowmobile he was operating in a ditch, collided with a guywire from a hydro pole. The accident occurred during darkness and it was reported that the headlight on the snowmobile was imoperative.

- On January 25, 1984, a 33-year old Norway House man was killed when he attempted to cross a roadway and collided with a passing motor vehicle. The operator was reported as intoxicated at the time of the accident.

N. COMMENTARY

The need for operator education and proper attitude development cannot be over emphasized. This particularly holds true for our young snowmobile operators. Of the accidents reported during the 1983/84 season, 34.1% involved operators 20 years of age and younger.

Single Snowmobile Accidents and Snowmobile/Fixed Object Collisions account for 53.4% of the reported accidents. These accidents were usually a direct result of the operators misjudging or simply not paying attention to the type of terrain they were operating on.

Public roadways accounted for 30.1% of the accident locations. In the majority of cases, snowmobiles were being operated along the roadways in direct violation of the Snowmobile Act.

Alcohol once again appears to be a contributing factor in a significant number of accidents. Operators in almost 30% of the reported accidents had been drinking or were in fact intoxicated. Alcohol was reported to be a contributing factor in one of two fatal accidents which occurred during the 1983-84 season.

Vehicle defects were reported in less than 9% of the accidents. In most cases, the failure was not on the part of the snowmobile, but that of it's operator. Any accidents where vehicle defects were mentioned, may be attributed to poor regular maintenance or improper pre-start checks.

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